

## ABSTRACT

Changeover control section 201 controls changeover operations of switch 202, switch 203 and symbols  $D_{plus}$ 's including only +A are sorted and output to the memory 5 204 side and symbols  $D_{minus}$ 's including -A are sorted and output to the memory 205 side, memory 204 and adder 206 perform in-phase additions between  $D_{plus}$ 's and memory 205 and adder 206 perform in-phase additions between  $D_{minus}$ 's and square addition section 207 calculates the squares 10 of  $D_{plus}$ 's after the in-phase addition and the squares of  $D_{minus}$ 's after the in-phase addition and then adds up the squared  $D_{plus}$ 's and  $D_{minus}$ 's.